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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/742,686	12/20/2000	Vlad Mitlin	3Com-77(3354TDCUSP)	5548
22470	7590	06/23/2005	EXAMINER	
HAYNES BEFFEL & WOLFELD LLP				PERILLA, JASON M
P O BOX 366				ART UNIT
HALF MOON BAY, CA 94019				PAPER NUMBER
2638				

DATE MAILED: 06/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/742,686	MITLIN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Jason M. Perilla	26348	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 24 March 2005.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 18-33, 41-49 and 51 is/are allowed.
- 6) Claim(s) 9-14 and 34-39 is/are rejected.
- 7) Claim(s) 1-8, 15-17, 40 and 50 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 14 July 2004 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | Paper No(s)/Mail Date. _____.   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____.                                   |

## **DETAILED ACTION**

1. Claims 1-51 are pending in the instant application.

### ***Response to Arguments/Amendments***

2. In view of the amendments to the claims filed March 24, 2005, the claim rejections under 35 U.S.C § 112, second paragraph, set forth in the office action dated November 19, 2004 have been withdrawn.
3. New rejections under 35 U.S.C § 112, second paragraph, are made below.

### ***Claim Objections***

4. Claims 1-8, 11-17, 36-40, and 50 are objected to because of the following informalities:

Regarding claim 1, in line 5, "the information field" should be replaced by –an information field--.

Regarding claim 11, in line 10, "the maximum number of transmissions (k)" is lacking antecedent basis.

Regarding claim 15, in line 5, "and a maximum" should be replaced by –a maximum--.

Regarding claim 36, in line 10, "the maximum number of transmissions (k)" is lacking antecedent basis.

Regarding claim 40, in line 5, "and a maximum" should be replaced by –a maximum--.

Regarding claim 50, in line 1, "the approximation" is lacking antecedent basis.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 9-14, and 34-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 9, the claim is indefinite because the use of “*a number of discrete multi-tone symbols*” (pg. 4, line 7; filed March 24, 2005) becomes confused with “*the discrete multi-tone symbol*” in line 9, “*the discrete multi-tone symbols*” in line 11, and “*the discrete multi-tone symbols*” in line 15. One skilled in the art is unable to conclusively determine how or if the various instances of “[a number of] discrete multi-tone symbol[s]” are related, and it makes the claim indefinite. Further, “combinations of a signal-to-noise ratio” in lines 10-11 are associated with the sets and net coding gains. However, “*a signal-to-noise ratio*” is determined according to a set of subchannels in line 14. Therefore, one is unable to determine the relationship between “*a signal-to-noise ratio*” of lines 10-11 and that of line 14. Because various interpretations of the claim may be made depending upon the relationship among the various instances of “[a number of] discrete multi-tone symbol[s]” and among the various instances of “*a signal-to-noise ratio*”, the claim is indefinite. Specifically, one is unable to determine if the instances are related or unrelated, and therefore, the scope of the claim language may not be definitively determined.

Regarding claim 10, the claim is rejected as being based upon a rejected parent claim.

Regarding claim 11, the claim is rejected for the same reasons as applied to claim 9 above.

Regarding claims 12-14, the claims are rejected as being based upon a rejected parent claim.

Regarding claim 34, the claim is rejected for the same reasons as applied to claim 9 above.

Regarding claim 35, the claim is rejected as being based upon a rejected parent claim.

Regarding claim 36, the claim is rejected for the same reasons as applied to claim 9 above.

Regarding claims 37-39, the claims are rejected as being based upon a rejected parent claim.

***Allowable Subject Matter***

7. Claims 1-8, 15-33, and 40-51 are indicated to contain allowable subject matter.

Regarding claims 1-8, 18-33, and 41-48, indication of allowable subject matter is made because the prior art of record does not disclose the use of the particular relationships (in the form of equations) present in the independent claims.

Regarding claims 15-17 and 40, indication of allowable subject matter is made because the prior art of record does not disclose the selection of t, K, and k such that no

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forward error correction is applied when the number of sub-channels exceeds a predetermined threshold number of sub-channels.

Regarding claims 49-51, the claims are indicated to contain allowable subject matter because the prior art of record does not disclose or obviate the method wherein the claimed particular subject matter is stored in a table and selected according to a signal to noise ratio representing a subset of subchannels.

***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Perilla whose telephone number is (571) 272-3055. The examiner can normally be reached on M-F 8-5 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571) 272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jason M. Perilla  
June 21, 2005

jmp



CHIEH M. FAN  
PRIMARY EXAMINER